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/The information in this report was obtained by the Scientific Research Division, Military Security Board, (Germany), Department of State, and is disseminated by CIA in accordance with paragraphs 2h and 3d of National Security Council Intelligence Directive #7./

1. The Society for Physical Science in Bavaria (Physikalische Gesellschaft in Bayern) held its first big convention on June 23 and 24, 1951, in Erlangen. As Prof. G. Hettner, the president, pointed out in his opening address, membership had just reached the two-hundred mark. With only relatively few guests from foreign countries, the fact that 231 persons registered as attending the convention, would seem to indicate that an unusually high proportion of the membership had gathered in Erlangen. This fact, plus the many reports of interesting and successful activities, would seem to refute any mild skepticism voiced in conversations as to the appropriateness and value of this convention. There is indication that everyone came away from hospitable Erlangen with a feeling of satisfaction over the harmonious and well-planned progress of the convention, due in large measure to Prof. H. Volz of Erlangen, functioning as "organization director", and to his co-workers.

2. The Society's membership suffered loss through the death of Ernst von Angerer on February 20, 1951, and of Arnold Sommerfeld on April 26th. In his opening address, the president honored the memory of these departed. The first group of lectures was devoted to paying tribute to the past great German names in the field of theoretical physics.

3. No attempt was made to present lectures of a general survey character. Instead, 31 short talks were given in the course of six sessions, and, by skillfully alloting the available time, it was possible to have these talks followed by some profitable discussion. The University of Munich led with twelve talks, followed by Erlangen with seven, Wuerzburg with four, and one lecture by the Bavarian Academy of Science. Four lectures were given by persons in the industry. Guest lectures--one each--were contributed by Heidelberg, Karlsruhe and Stuttgart.

4. In scanning the papers presented for those which struck a response of more general interest, the following may be mentioned particularly:

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a) Prof. Joos' research institute in Munich has begun a systematic study of processes in photographic layers, taking as a guide Guerney's and Mott's new and accepted theory of the latent image.

b) H. Ellenberger of Munich gave a report of further developments of the bifilar gravimeter as designed by Tomaschek and Schaffernicht, which achieves compensation for gravity by means of a second bifilar system. Of note is the sharp reduction in height of this type of "dual bifilar gravimeters" from 150 cm to 12 cm, without reducing efficiency.

c) The account of new experiments in connection with the Takata effect by H. A. Bomke of Munich was followed by a lively discussic . Doubts, voiced both by chemists and physicists, somewhat dampered the optimistic belief that a new proof had been found. The further re..ts of this intrinsically worthwhile project will be keenly awaited.

d) Great interest was shown in the measurements of supraconduction by the Munich group under Prof. Meissner, and the Erlangen group under Prof. Hilsch. The Munich people prefer to work with massive test units of a high degree of purity, whereas Erlangen is conducting tests with vapor-sprayed coatings produced at extremely low temperatures with the addition of small quantities of specific "transition metals". Hilsch first gave a demonstration of the testing method, remarking at the outset--being the cautious demonstrator of the Pohl school that he is--that he could not be certain whether the experiment would succeed absolutely. When it did turn out successfully, his listeners were not surprised, and there was generous applause.

e) The Siemens Company plant in Erlangen demonstrated two new ultransonic devices. One is used in non-destructive materials testing. The other is used for soldering on aluminum, and had been exhibited for the first time at the Hanover fair this year. By having ultrasonic rays destroy the layer of oxide on a particular piece of aluminum, it is possible to apply a coating of tin, and thus also to solder. This process will be of great value in laboratory technique.

(Available on loan from CIA Library is a copy of Physikalische Verhandlungen 1951, No. 5, Physik Verlag, Mosbach-Baden which contains summaries of the talks by their respective authors.)

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